

FIG. 1

2/43

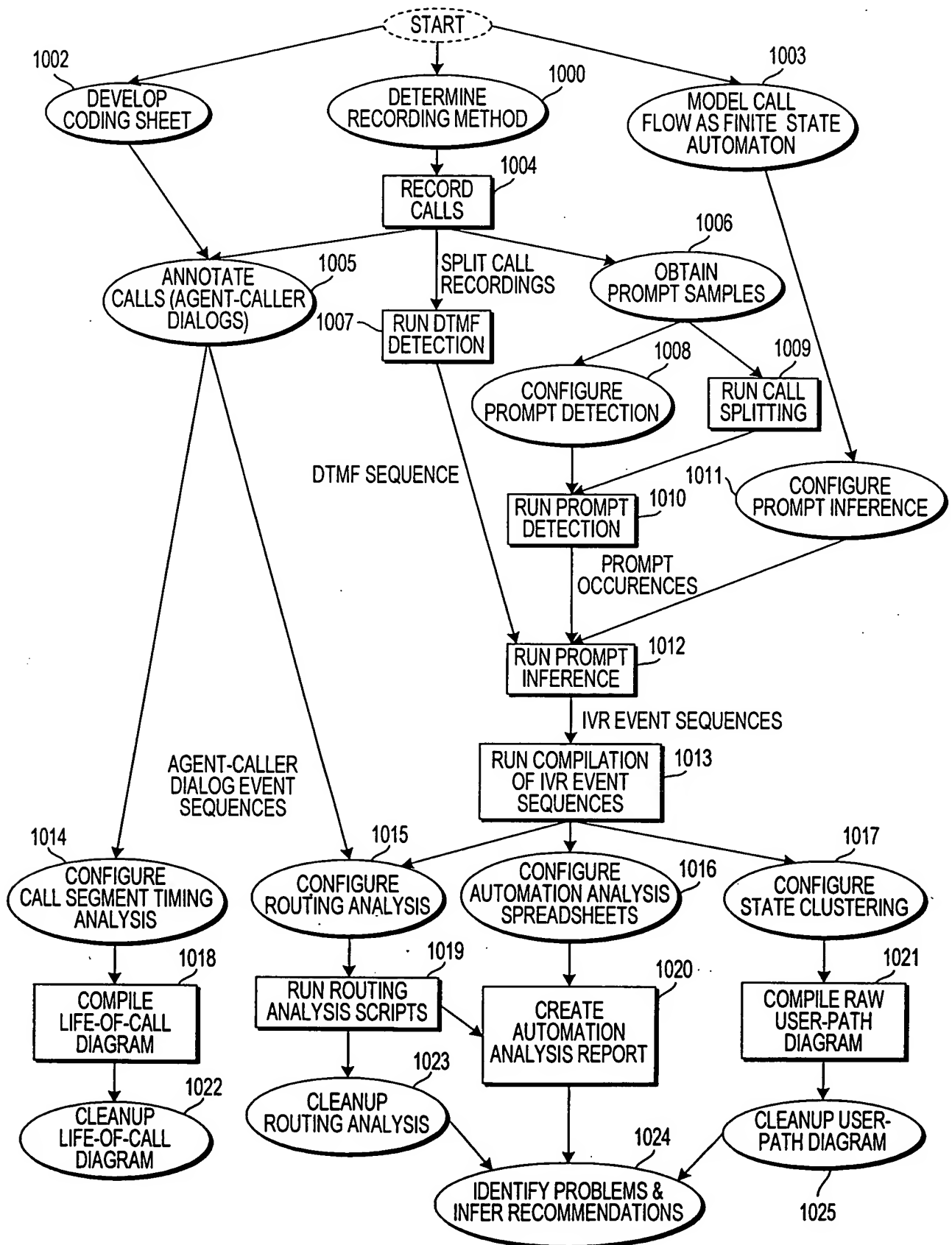


FIG. 1A

3/43

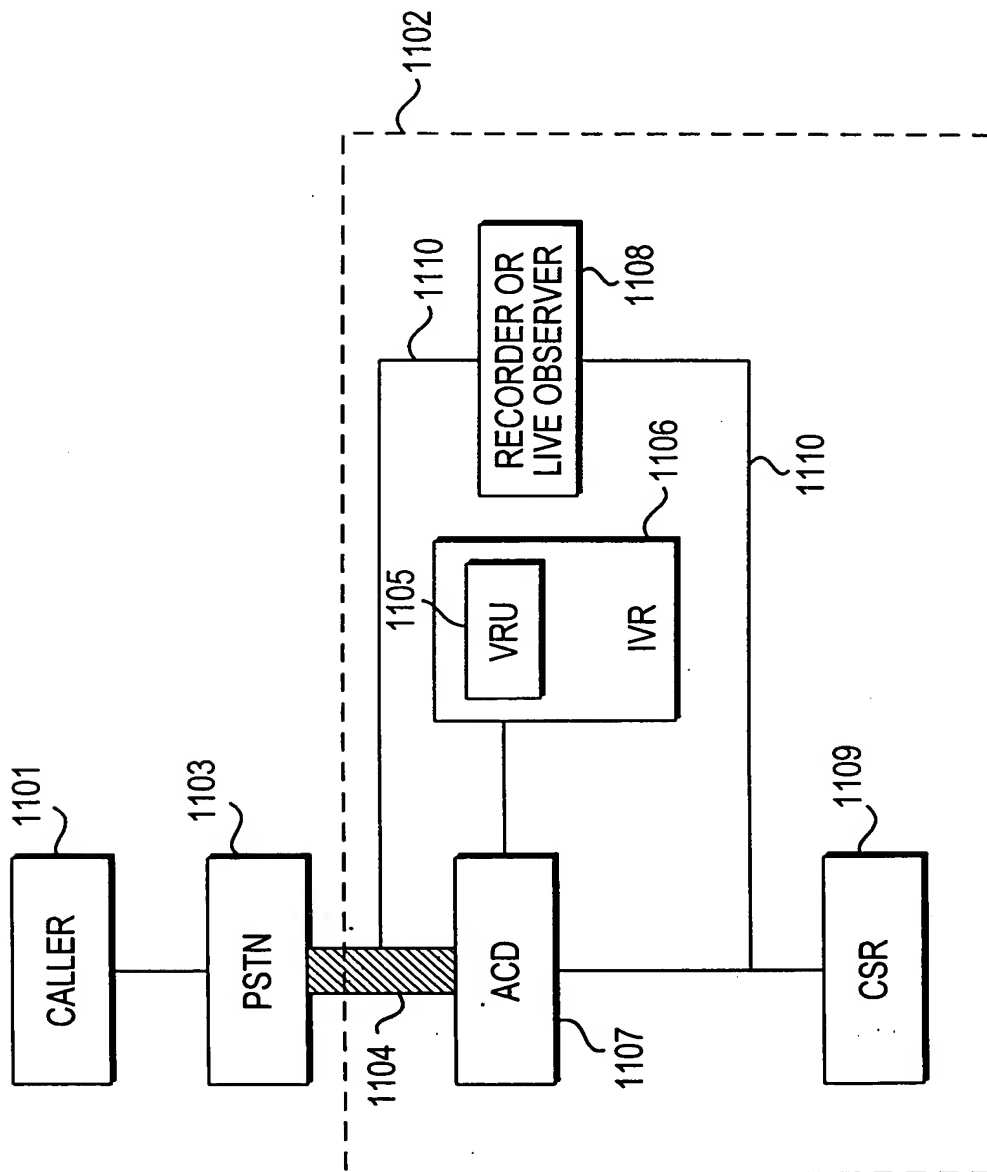
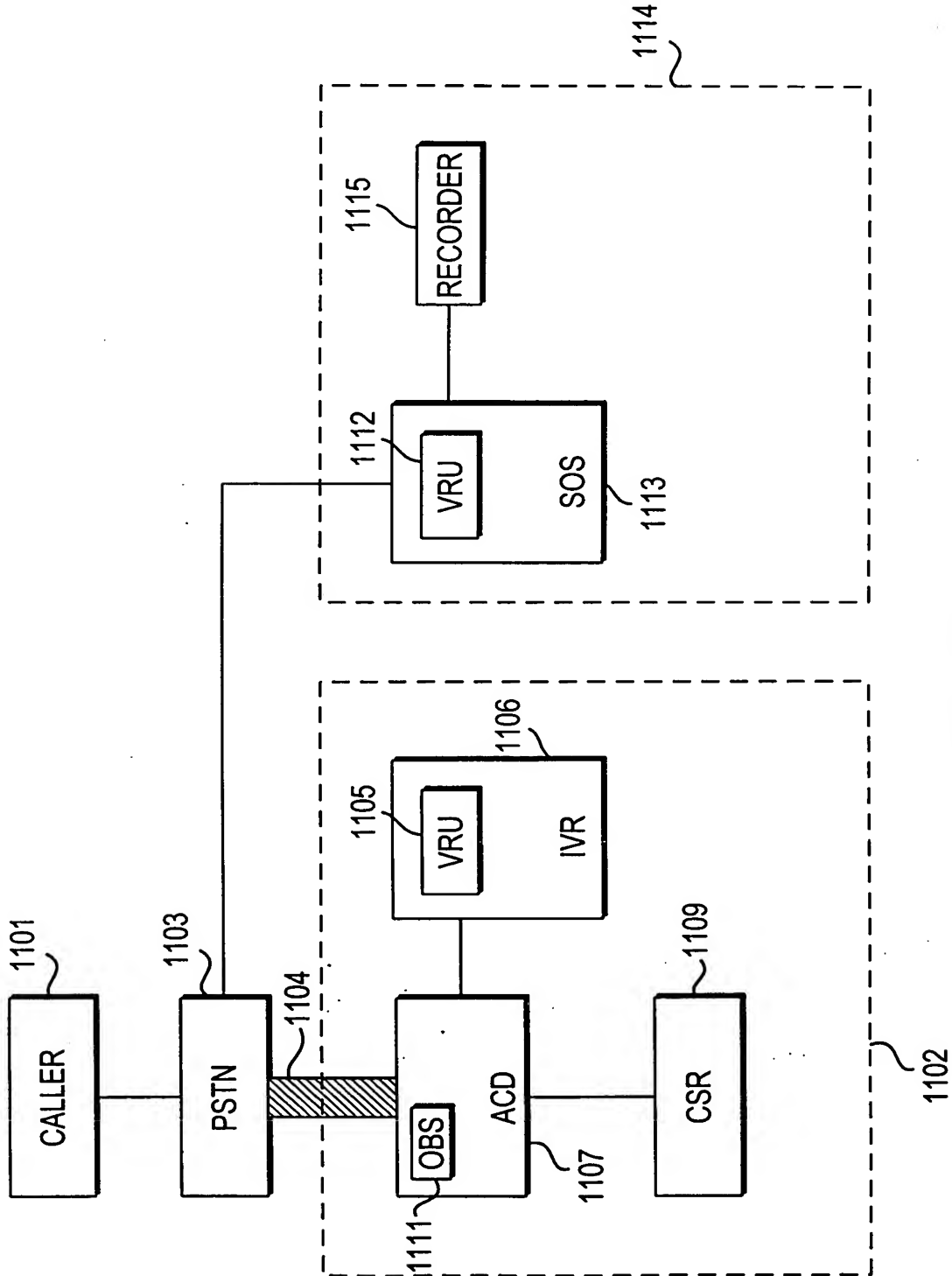


FIG. 2A

4/43



5/43

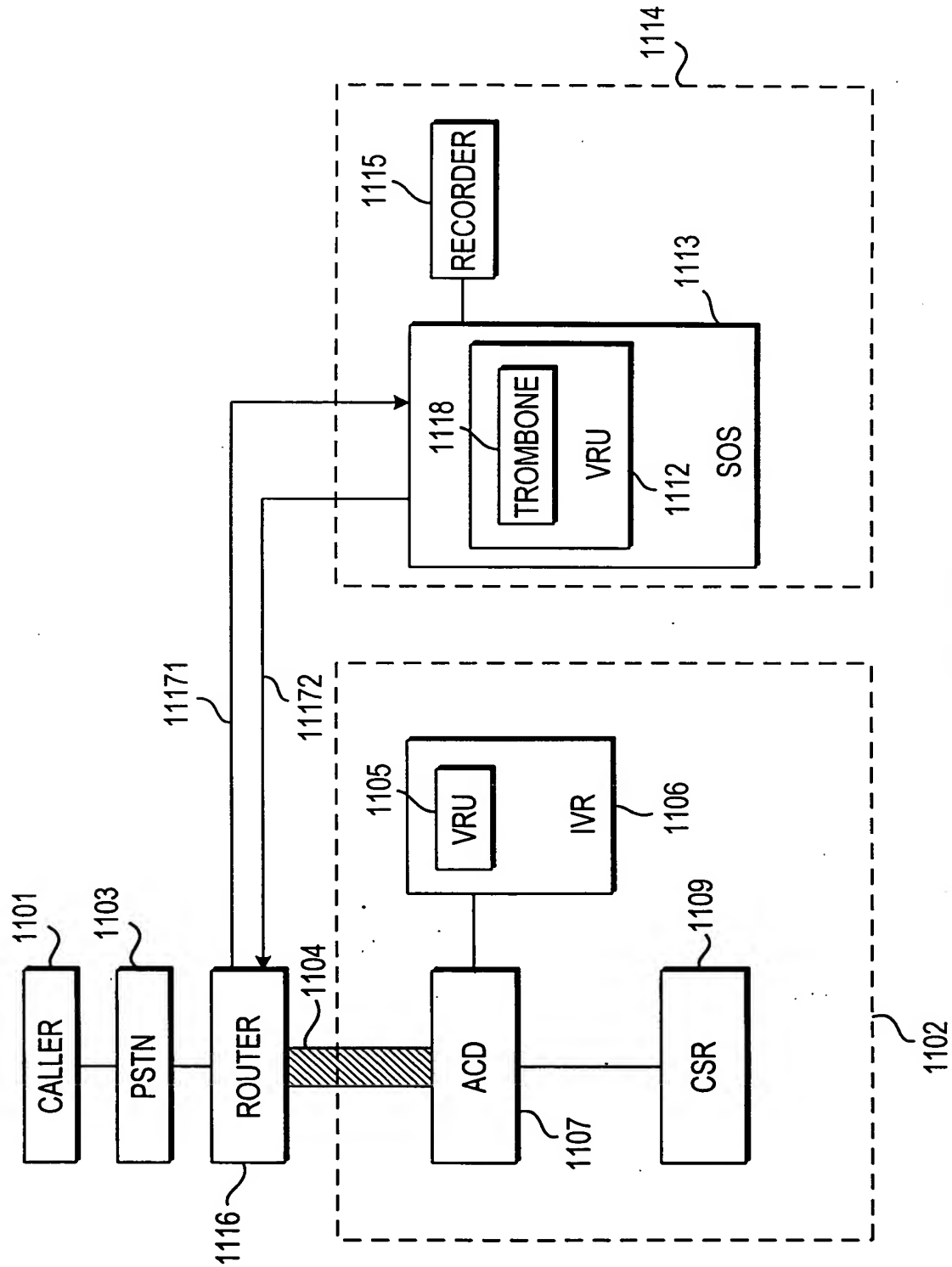
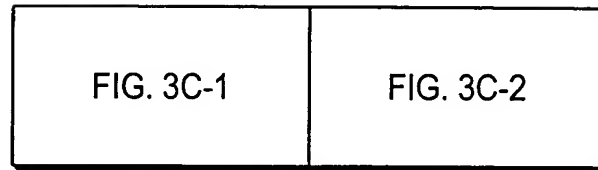


FIG. 2C



7/43



*FIG. 3B*

8/43

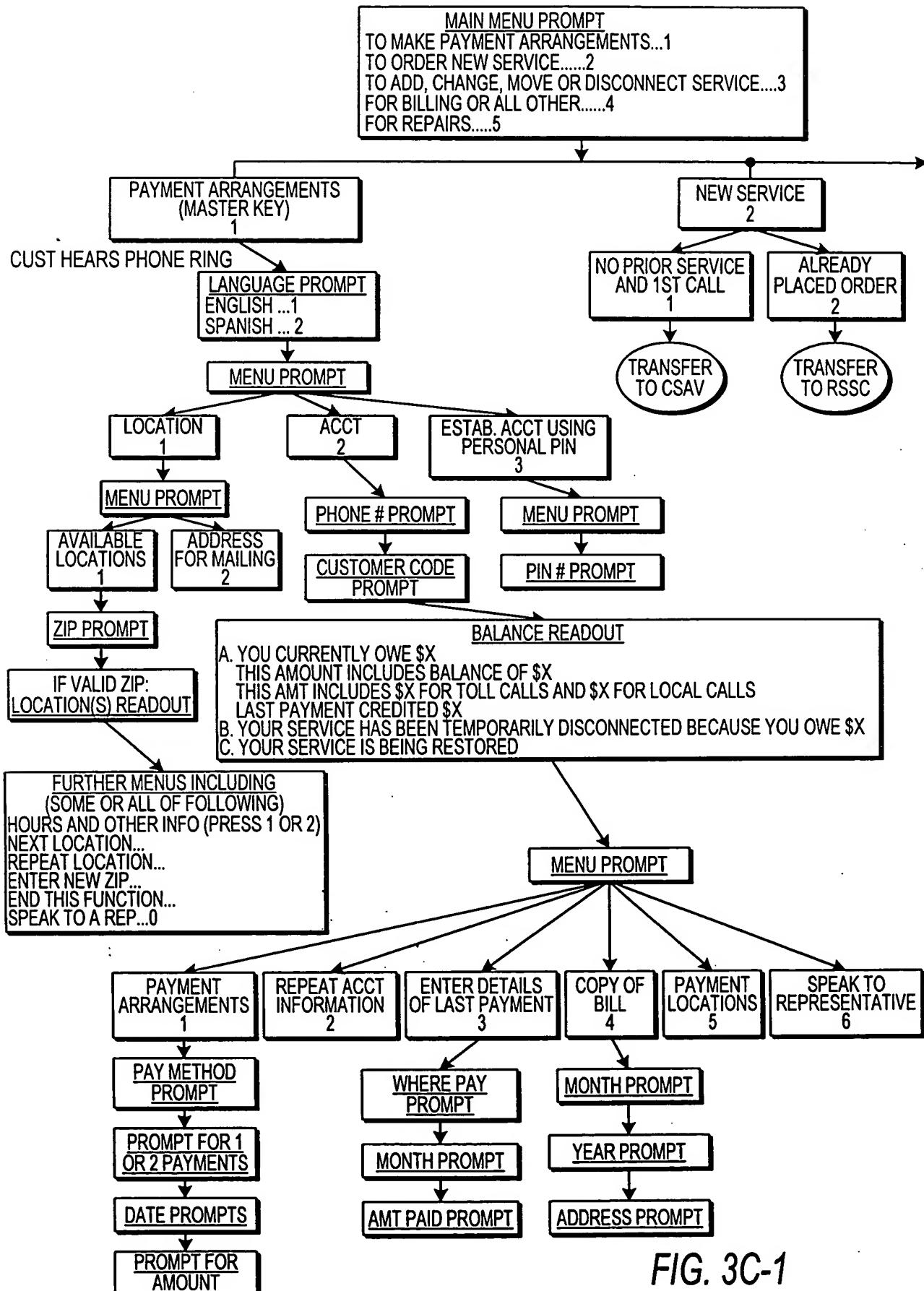


FIG. 3C-1



9/43

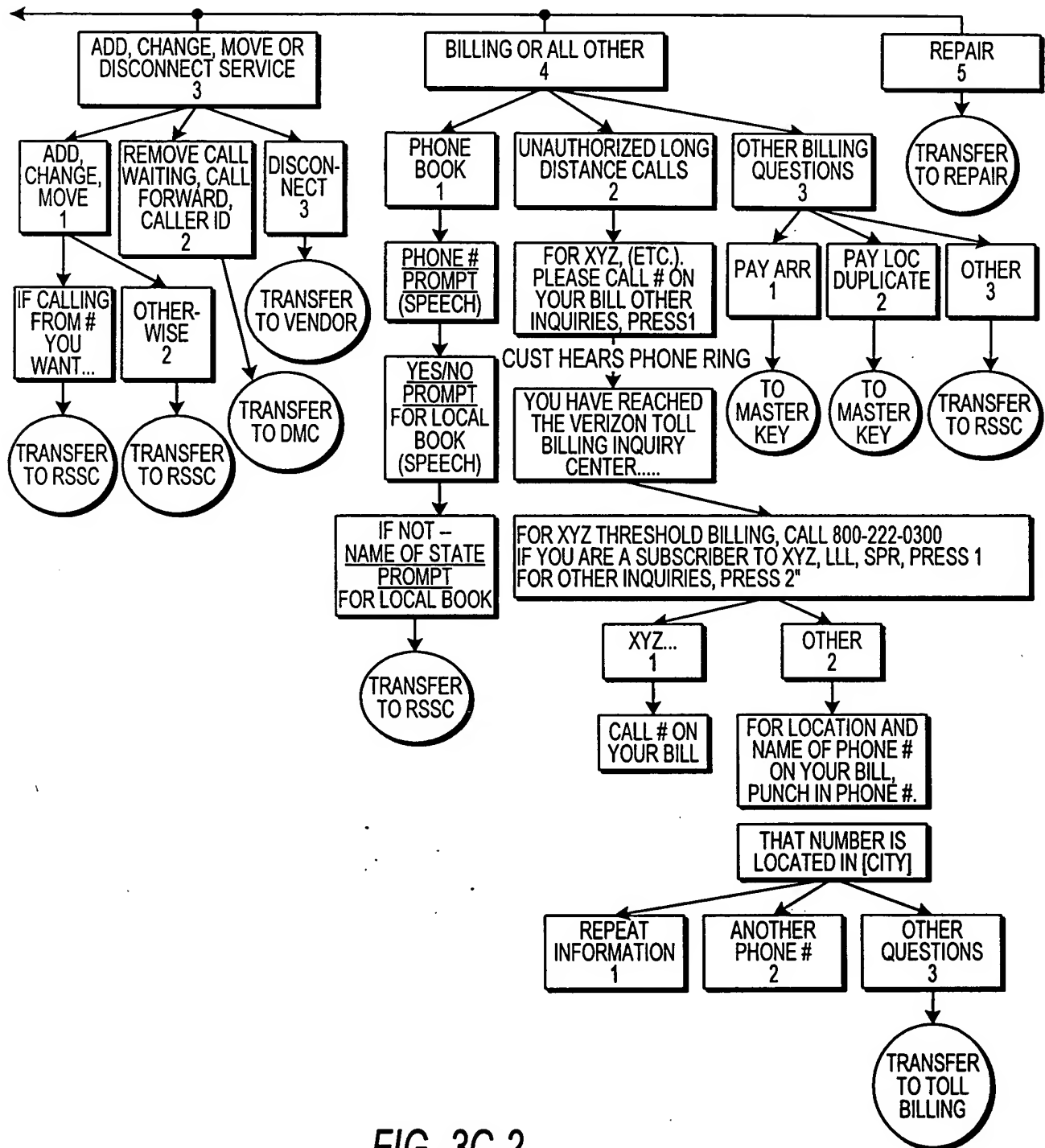


FIG. 3C-2

10/43

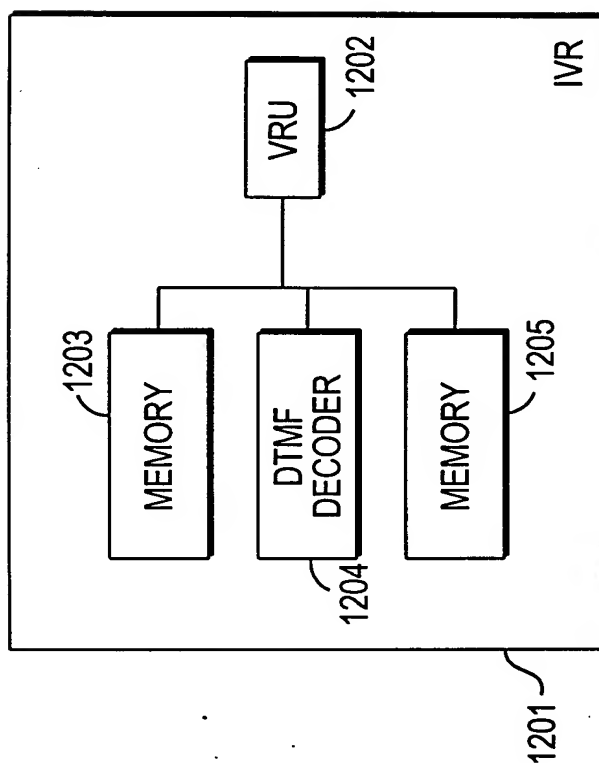


FIG. 3D

11/43

STATE	TIME	OUTCOME
CALL ARRIVAL	##:##:##	DATE; CALLER IDENTIFICATION
INITIAL MENU	##:##:##	TOUCH TONE SELECTION, E.G., 3
TELEPHONE NUMBER PROMPT	##:##:##	TOUCH TONE NUMBERS PRESSED, E.G., 617-555-1212
VALIDATE TELEPHONE NUMBER	##:##:##	INVALID NUMBER
TELEPHONE NUMBER RE-PROMPT	##:##:##	TOUCH TONE NUMBERS PRESSED
VALIDATE TELEPHONE NUMBER	##:##:##	VALID NUMBER
MENU 1	##:##:##	TOUCH TONE SELECTION
QUERY A	##:##:##	TOUCH TONE NUMBERS PRESSED
QUERY B	##:##:##	TOUCH TONE NUMBERS PRESSED
MENU 2	##:##:##	TOUCH TONE SELECTION
TRANSFER TO AGENT	##:##:##	TRANSFER QUEUE (CALLER ON HOLD)
IVR END	##:##:##	TRANSFER COMPLETED

FIG. 3E

12/43

UNIQUE ID	TIME	STATE	OUTCOME
212-123-4567	###,##,##	CALL ARRIVAL	DATE
212-123-4567	###,##,##	INITIAL MENU	TOUCH TONE SELECTION
212-123-4567	###,##,##	ACCOUNT NO. PROMPT	TOUCH TONE NUMBERS PRESSED
212-123-4567	###,##,##	VALIDATE NUMBER	INVALID
212-123-4567	###,##,##	ACCOUNT NO. RE-PROMPT	CALL TERMINATED BY CALLER
201-321-4567	###,##,##	CALL ARRIVAL	DATE
201-321-4567	###,##,##	INITIAL MENU	TOUCH TONE SELECTION
201-321-4567	###,##,##	ACCOUNT NO. PROMPT	TOUCH TONE NUMBERS PRESSED
201-321-4567	###,##,##	VALIDATE NUMBER	VALID
201-321-4567	###,##,##	MENU 1	TOUCH TONE SELECTION
201-321-4567	###,##,##	TRANSFER TO AGENT	TRANSFER COMPLETED
617-987-6543	###,##,##	CALL ARRIVAL	DATE
617-987-6543	...	...	...
617-987-6543	###,##,##	ACCOUNT BALANCE	INFORMATION DELIVERED
617-987-6543	###,##,##	MENU 3	TOUCH TONE ELECTION
617-987-6543	###,##,##	TRANSFER TO AGENT	TRANSFER QUEUE (CALLER ON HOLD)
617-987-6543	###,##,##	IVR END	CALL TERMINATED BY CALLER

FIG. 3F

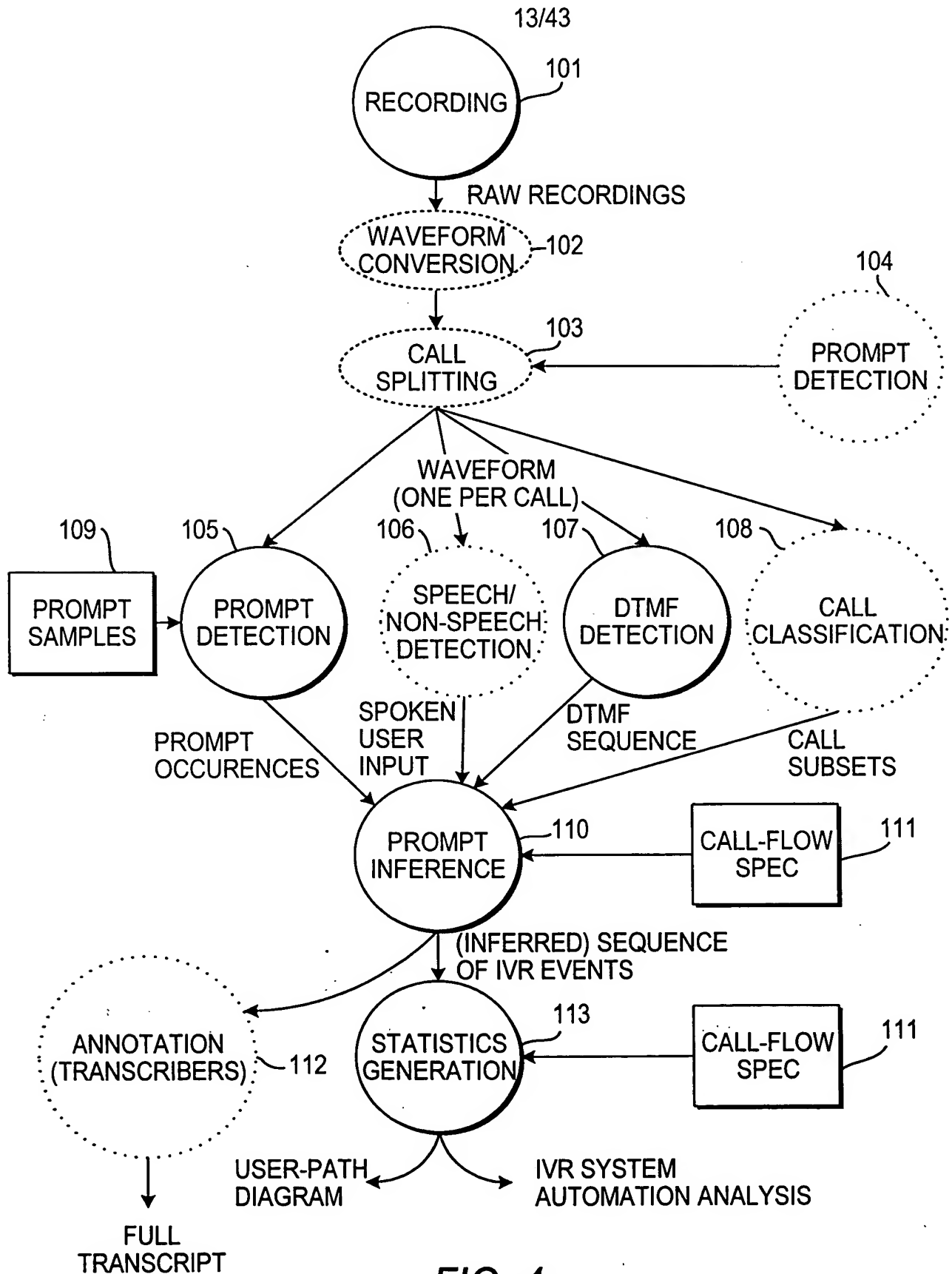


FIG. 4

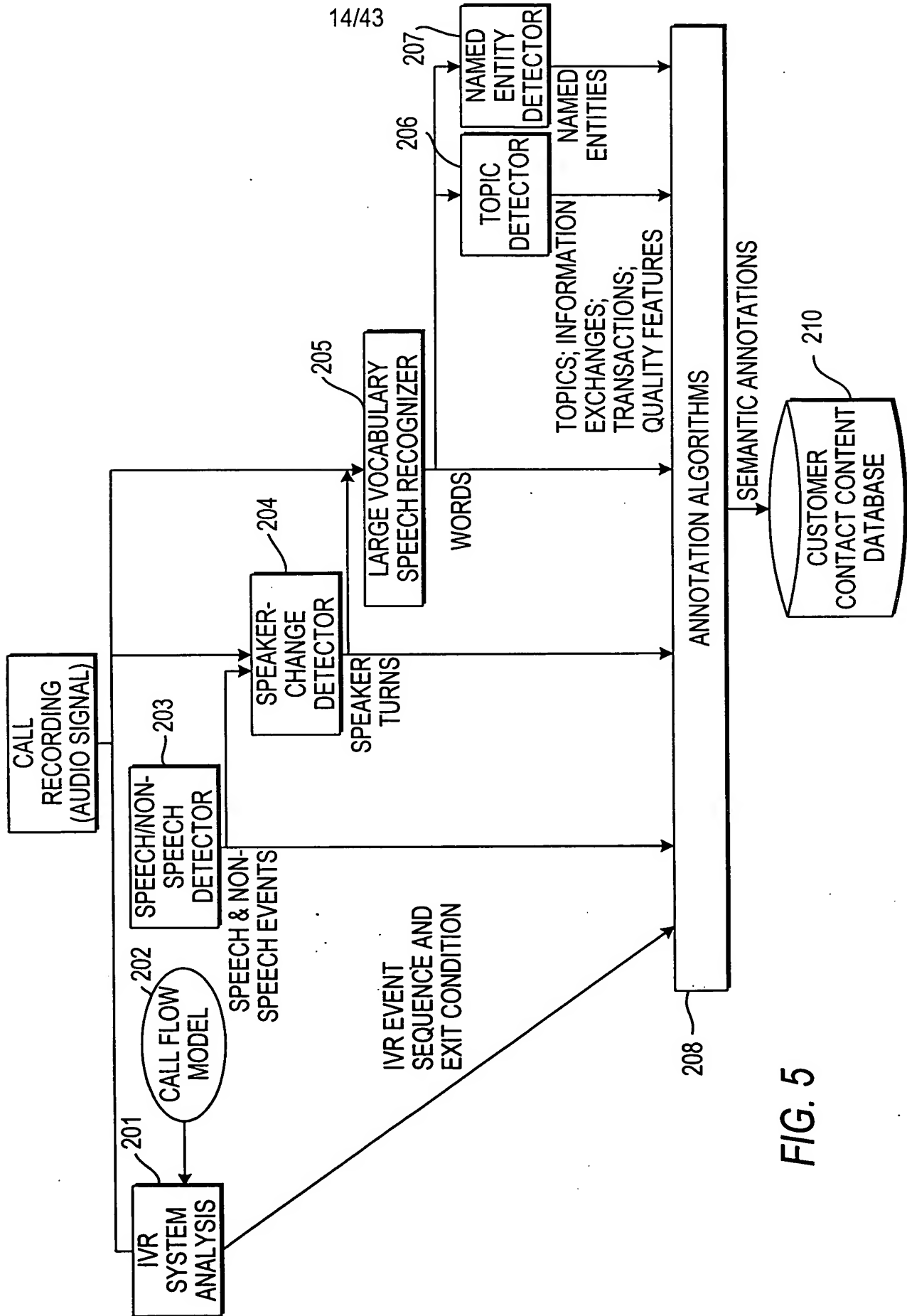
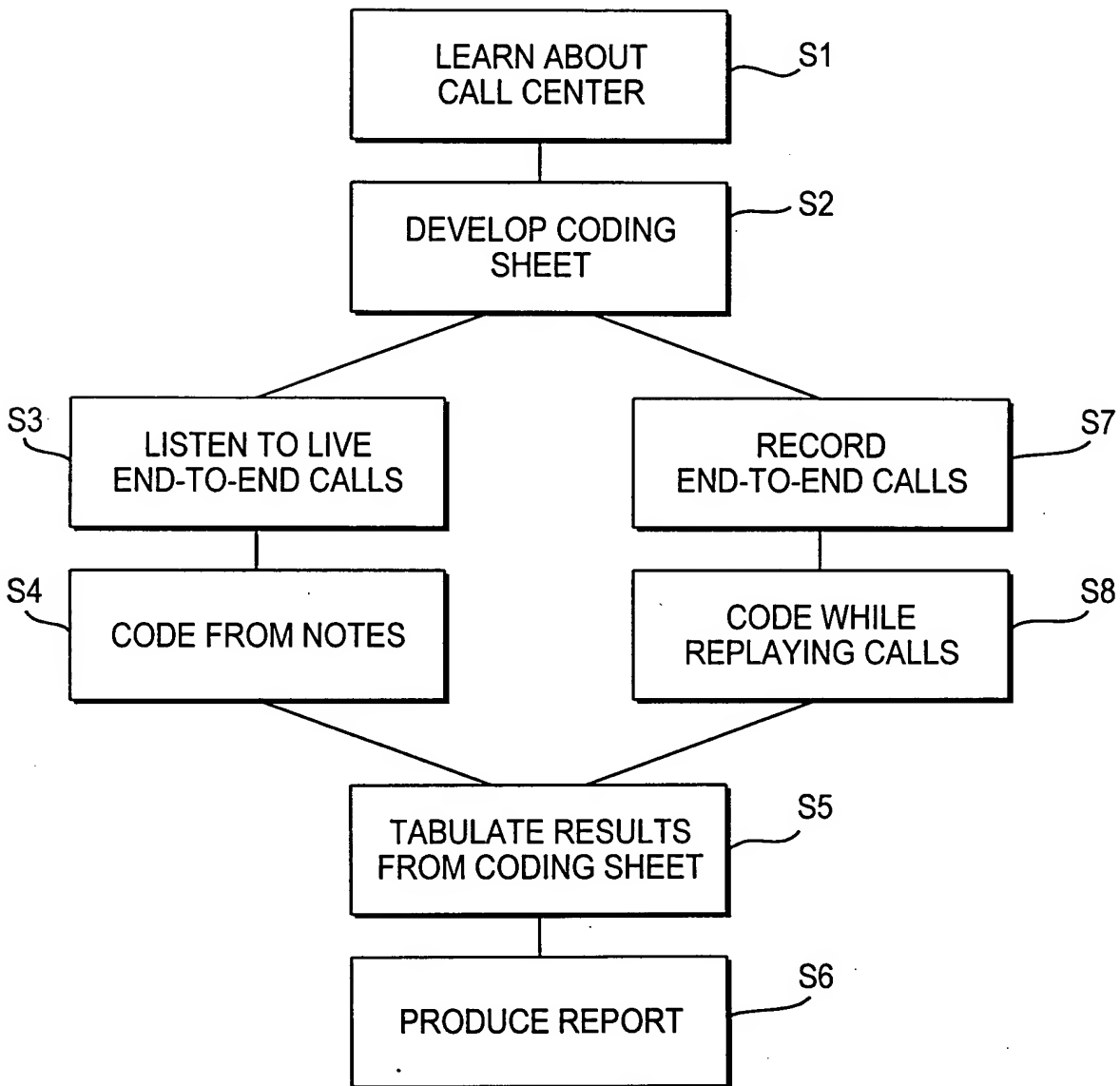


FIG. 5

15/43



**FIG. 6A**

16/43

*FIG. 6B*

FIG. 6B-1
FIG. 6B-2
FIG. 6B-3
FIG. 6B-4



17/43

CALL NUMBER	10	38	53	64	M-10	M-33	M-71	M-130	M-178	M-215
TRANSCRIBER	YJT	YJT	YJT	64	MJW	MJW	MJW	MJW	MJW	MJW
DATE:	12/14/1996	12/17/1996	12/19/1996	27-DEC						
PHONE #:	2121234567	2121234567	2011234567	9141234567	9731234567	9181234567	7321234567	5161234567	2021234567	7181234567
SEX OF CALLER:	M	M	M	F	M	M	F	F	M	M
CLOCK TIME (END OF INTERACTION)	1:58 PM	12:03 PM	2:40 PM	2:21 PM	12:41 PM	14:50:41	14:30:57	9:46:48	12:10:21	12:01:11
DURATION OF INTERACTION (WHOLE MIN)	6	6	12	10	4	0	1	4	9	3
DURATION OF ENTIRE CALL (WHOLE MIN)	6	6	12	11	5	3	3	12	68	5
WAS THIS A FULLY AUTOMATED CALL?	0	0	0	0	0	0	0	0	0	0
DID CALL INVOLVE AN AGENT?	0	1	1	1	1	0	1	1	1	1
DEBUG	0	0	0	0	0	0	0	0	0	0
IVR SUMMARY: MENU CHOICES	4	31	31	40 INVALID	BILLING, OTHER	ADD/CHANGE	REPAIR	NEW, 0	NEW	BILLING, OTHER
(USE WORDS: "PHONE #" "RING" "FAST BUSY"	3	PHONE NO		3	OTHER	ADD/CHANGE		INPUT NUMBER 2,2		OTHER
"HANG UP" "ROTARY"	HANG UP	RING		3	4, 3, 3	3, 1, 973-672-3626				4, 3, 3
DID CALLER TRY 0 AND FAIL?	0	0	0	1	0	0	0	1	0	0
WAS CALL INCOMPLETE (0 FUNCTIONS?)	0	0	0	0	0	1	0	0	0	0
(IF 1, INDICATE WHICH ONE APPLIES)										
ABANDON AT START OF IVR (RINGING OR INTRO)										
ABANDON AT PHONE # PROMPT										
ABANDON AT CUSTOMER ID PROMPT										
ABANDON AT OTHER PROMPT	1									
ABANDON WHILE RINGING FOR AGENT										
ABANDON AT "ALL OUR AGENTS ARE CURRENTLY"						1				
ABANDON AT FAST BUSY OR SYSTEM BUG										
UNUSUALLY HEAVY CALL VOLUMES										
WHERE IN IVR DID THEY ABANDON										
1 MASTER KEY										
2 NEW SERVICE										
3 ADD/CHANGE						1				
4 BILLING/OTHER	1									
5 REPAIR										
(IF CALLER GOT TO AN AGENT, HOW?)										
BY ROTARY PHONE (0 TONES PRESSED?)										
BY AUTO TRANSFER BASED ON PHONE NUMBER?										
THROUGH INTRODUCTION BY PREVIOUS AGENT?										
IN IVR THROUGH INVALID/TIMEOUT?							1	1		
IN IVR, THROUGH A VALID NONZERO TRANSFER?	0	1	1	1	1	0	0	0	1	1
BY PRESSING "0"										
OTHER (DIDN'T CATCH IT)										
INDICATE MENU CHOICES MADE IN IVR										
1. PAY ARRANGEMENTS (MASTER KEY)										
2-1 ORDER NEW SERVICE (WELCOME CENTER)										

FIG. 6B-1

[illegible]

**FIG. 6B-2**

19/43

[illegible]

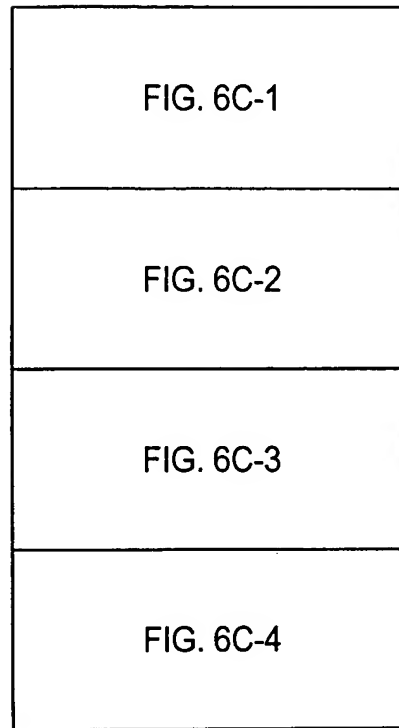
FIG. 6B-3

**FIG. 6B-4**

[illegible]

21/43

*FIG. 6C*



22/43

	A	C	D	E
1	CALL NUMBER	ALL CALLS STATISTICS		
2	TRANSCRIBER			
3	DATE:			
4	PHONE #:			
5	SEX OF CALLER:			
6	CLOCK TIME (END OF INTERACTION)			
7	DURATION OF INTERACTION (WHOLE MIN)	5.123042506	0%	
8	DURATION OF ENTIRE CALL (WHOLE MIN)	7.548098434	0%	
9	WAS THIS A FULLY AUTOMATED CALL?	14	3%	
10	DID CALL INVOLVE AN AGENT?	339	447	
11				
12	IVR SUMMARY: (MENU CHOICES)	0	0%	
13	(USE WORDS: "PHONE #" "RING" "FAST BUSY"	0	0%	
14	"HANG UP" "ROTARY"	0	0%	
15				
16	DID CALLER TRY 0 AND FAIL?	30	7%	
17	WAS CALL INCOMPLETE (0 FUNCTIONS?)	94	21%	
18	[IF 1, INDICATE WHICH ONE APPLIES]	0	0%	
19	ABANDON AT START OF IVR (RINGING OR INTRO)	0	0%	
20	ABANDON AT PHONE # PROMPT	4	1%	
21	ABANDON AT CUSTOMER ID PROMPT	2	0%	
22	ABANDON AT PROMPT	22	5%	
23	ABANDON WHILE RINGING FOR AGENT	2	0%	
24	ABANDON AT "ALL OUR AGENTS ARE CURRENTLY"	4	1%	
25	ABANDON AT FAST BUSY OR SYSTEM BUG	14	3%	
26	UNUSUALLY HEAVY CALL VOLUMES	17	4%	
27	OTHER:	29	6%	
28	WHERE IN IVR DID THEY ABANDON			
29	1 MASTERKEY	20	4%	
30	2 NEW SERVICE	3	1%	
31	3 ADD/CHANGE	13	3%	
32	4 BILLING/OTHER	12	3%	
33	5 REPAIR	2	0%	
34	OTHER	18	4%	
35				
36	[IF CALLER GOT TO AN AGENT, HOW?]	0	0%	
37	BY ROTARY PHONE (0 TONES PRESSED)?	62	14%	
38	BY AUTO TRANSFER BASED ON PHONE NUMBER?	0	0%	
39	THROUGH INTRODUCTION BY PREVIOUS AGENT?	0	0%	
40	IN IVR THROUGH IVALID/TIMEOUT?	28	6%	
41	IN IVR, THROUGH A VALID NONZERO TRANSFER?	228	51%	
42	BY PRESSING "0"	19	4%	
43	OTHER (DIDN'T CATCH IT)	2	0%	
44	INDICATE MENU CHOICES MADE IN IVR	0	0%	
45	1. PAY ARRANGMENTS (MASTER KEY)	12	3%	
46	2-1 ORDER NEW SERVICE (WELCOME CENTER)	28	6%	
47	2-2 NEW SERVICE - FOLLOW -UP	37	8%	
48	3-1 ADD/ADD	64	14%	
49	3-2 ADD/REMOVE	12	3%	

FIG. 6C-1

23/43

	A	C	D	E
50	3-3 DISCONNECT	11	2%	
51	4-1 BILLING/PHONE DIRECTORY	1	0%	
52	4-2 BILLING/ UNAUTHOURIZED CALLS	11	2%	
53	4-3-1 BILLING/OTHER/PAY/MASTER K	3	1%	
54	4-3-2 BILLING/OTHER/MASTER KEY	11	2%	
55	4-3-3 BILLING/OTHER/OTHER	71	16%	
56	5 REPAIR (REPAIR CENTER)	14	3%	
57	1-2 (SPANISH)	1	0%	
58	[INDICATE FUNCTIONS COMPLETED IN IVR]	0	0%	
59	PAYMENT CENTER LOCATION	3	1%	
60	PAYMENT CENTER HOURS	0	0%	
61	PAYMENT MAILING ADDRESS	2	0%	
62	ACCOUNT INFORMATION	14	3%	
63	ESTABLISH ACCT USING PIN	0	0%	
64	PAYMENT ARRANGEMENTS	1	0%	
65	ENTER DETAILS OF LAST PAYMENT	0	0%	
66	COPY OF BILL	0	0%	
67	ORDER PHONE DIRECTORY	0	0%	
68	IDENTIFY UNAUTH CALL	4	1%	
69	GET 800 # TO IDENTIFY UNAUTH CALLS-ETC.	3	1%	
70				
71	AGENT CALL SUMMARY: (PROBLEM + SOLUTION)			
72				
73				
74	COULD THIS HAVE BEEN DONE IN MK/TB	24	5%	
75				
76	I. DID AGENT PERFORM AUTOMATED FUNCTIONS?	25	6%	
77	[INDICATE WHICH ONES]			
78	PAYMENT CENTER LOCATION	0	0%	
79	PAYMENT CENTER HOURS	0	0%	
80	PAYMENT MAILING ADDRESS	0	0%	
81	ACCOUNT INFORMATION	9	2%	
82	ESTABLISH ACCT USING PIN	0	0%	
83	PAYMENT ARRANGEMENTS	5	1%	
84	ENTER DETAILS OF LAST PAYMENT	0	0%	
85	COPY OF BILL	5	1%	
86	ORDER PHONE DIRECTORY	1	0%	
87	IDENTIFY ABC UNAUTH CALL	5	1%	
88	IDENTIFY XYZ ETC. UNAUTH CALL	0	0%	
89				
90	II. DID AGENT DO POTENTIALLY AUTO FUNCTIONS?	16	4%	
91	[INDICATE WHICH ONES]			
92	FIND TOLL CALL RANGE	8	0%	
93	REQUEST CALLING CARD			
94	GET VOICE MAIL ACCESS #	3	0%	
95	GET 3+2 DIGIT NUMBER ON BILL	2	0%	
96	GET INFO ON RATES-BY MAIL OR SEE DIRECT	0	0%	
97	GET ADDRESS FOR WRITING TO REFUTE BILL	0	0%	

FIG. 6C-2

24/43

	A	C	D	E
98	OTHER: (POTENTIALLY AUTOMATABLE)	3	0%	
99				
100	III. DID AGENT DO NON-AUTOMATED FUNCTIONS?	220	49%	
101	[INDICATE WHICH ONES]			
102	PAYMENT ARRANGEMENTS	5	1%	
103	NEW SERVICE- EXPLAINS 2 PARTS NEEDED	21	5%	
104	NEW SERVICE FOLLOW UP (NOT DISCONNECT)	10	2%	
105	CHECK ON STATUS OF PENDING ORDER	6	0%	
106	SALES (PKGS, SERVICES, LINES, JACKS, ETC)	65	15%	
107	SALES (REMOVE FEATURE- AGENT ASKS WHY)	16	4%	
108	DISCONNECT (AND FORWARD CALLS)	9	2%	
109	EXPLAIN BILL	25	6%	
110	REMOVE UNAUTHORIZED CALL FROM BILL	4	1%	
111	REMOVE OTHER CHARGES FROM BILL	2	0%	
112	CONFIRM TODAY'S REPAIR SCHEDULE	3	1%	
113	SCHEDULE A VISIT WIHT REPAIRMAN	8	2%	
114	TELL HOW/WHEN TO USE FEATURES THEY OWN	12	3%	
115	OTHER	34	8%	
116	WAS THIS CALL CODED ABOVE?	675	579	
117	DID AGENT SEE CALL AS MISDIRECTED?	81	18%	
118	DID AGENT TRANSFER THE CALL?	82	18%	
119	IV. IF TRANSFERRED, TO WHAT DESTINATION?	0	0%	
120	800-281-8584 MASTER KEY	0	0%	
121	800-275-2355 REPAIR	12	3%	
122	800-287-9933 COLLECTION CENTER	10	2%	
123	800-870-0000 SERVICE SOLUTIONS	0	0%	
124	TPV	1	0%	
125	888-243-9733 TOLL BILLING	9	2%	
126	800-246-2800 UNLAWFUL CALL SOL CTR	0	0%	
127	800-585-6127 INSTALLATION HOTLINE	11	2%	
128	877-525-2375 DSL	2	0%	
129	800-427-9977 "BUSINESS OFFICE"	1	0%	
130	DMC	1	0%	
131	NEW SERVICE FOLLOWUP	1	0%	
132	DISCONNECT	1	0%	
133	TELL HOW TO USE FEATURES	1	0%	
134	WELCOME CENTER	10	2%	
135	BUSINESS ACCOUNTS	2	0%	
136	ISP CALL/VERIZON ONLINE	2	0%	
137	WIRELESS	3	1%	
138	DIFFERENT CARRIER	2	0%	
139	SUPERVISOR	0	0%	
140	OTHER	3	1%	
141	TRANSE TO SPANISH AGENT	6	1%	
142	WAS TRANSER WARM (AGENT STAYED)?	34	8%	
143	DURATION WITH SECOND AGENT?	663	0.292715232	
144	FURTHER TRANSFERS?	14	3%	
145	[IF YES]			
146	TOTAL NUMBER OF AGENTS INVOLVED	205	9%	

FIG. 6C-3



25/43

	A	C	D	E
147				
148	EXPLAIN:			
149				
150	TOPIC SUMMARY			
151	PAYMENT ARRANGEMENT	10		
152	NEW SERVICE	21		
153	ORDER FOLLOW-UP	16		
154	SALES-ADD	65		
155	SALES-REMOVE	16		
156	DISCONNECT	9		
157	PHONE DIRECTORY	1		
158	UNAUTHORIZED CALLS	9		
159	BALANCE/COPY...	14		
160	OTHER	89		
161	REPAIR	11		
162	SPANISH	6		
163	REROUTE			
164		267		
165				
166				
167				
168				
169				
170				
171				
172				
173				
174	ROUTING SUMMARY			
175	1 OR 4-3-1 PAY ARRANGMENTS (MASTER KEY)			
176	2-1 ORDER NEW SERVICE (WELCOME CENTER)			
177	2-2 NEW SERVICE-FOLLOW-UP			
178	3-1 ADD/ADD			
179	3-2 ADD/REMOVE			
180	3-3 DISCONNECT			
181	4-1 BILLING/PHONE DIRECTORY			
182	4-2 BILLING/UNAUTHORIZED CALLS			
183	4-3-2 BALANCE/COPY/LOCATIONS/LAST PAYMENT			
184	4-3-3 OTHER			
185	5 REPAIR (REPAIR CENTER)			
186	1-2 (SPANISH)			
187	ROTARY (INITIAL TIMEOUT)			
188	INVALID, TIMEOUT, OR "0" ONCE IN IVR			
189	OTHER (UNKNOWN)			

FIG. 6C-4

26/43

DATA	CONCLUSION
1. CUSTOMER ROUTES SELF IN IVR TO WRONG AGENT 2. AGENT TRANSFERS CUSTOMER IN RESPONSE TO CUSTOMER NEED.	MISROUTING (2 OR MORE AGENTS INVOLVED INSTEAD OF 1)
1. CUSTOMER ROUTES SELF IN IVR TO WRONG AGENT 2. AGENT PERFORMS FUNCTION ANYWAY.	MISROUTING (WRONG AGENT INVOLVED)
1. AGENT PERFORMS FUNCTION. 2. FUNCTION IS AVAILABLE IN IVR.	UNDERUTILIZATION OF IVR FUNCTIONALITY.
1. AGENT PERFORMS FUNCTION 2. FUNCTION NOT CURRENTLY AVAILABLE IN IVR. 3. FUNCTION COULD POTENTIALLY BE ADDED	IVR MISSING CRUCIAL FUNCTIONALITY
1. CUSTOMERS OPTING OUT OF IVR AT FEW POPULAR POINTS. 2. IVR DOES NOT PROMPT FOR ID AT THE POINT.	MISSED OPPORTUNITY FOR AUTOMATED CUSTOMER DATA INPUT
1. AGENT STAYS ON THE LINE DURING TRANSFER 2. POLICY DOES NOT ADVOCATE A "WARM TRANSFER"	POSSIBLE POLICY VIOLATION (REGARDING WARM TRANSFERS)
1. AGENT STAYS ON THE LINE DURING TRANSFER 2. TIME ON HOLD WITH CUSTOMER SUGGESTS AGENT NOT USING SPECIAL QUEUE FOR TRANSFER	POSSIBLE POLICY VIOLATION (REGARDING USE OF FAST QUEUE FOR AGENT TRANSFERS)
1. # CUSTOMERS REMAINING SILENT IN IVR 2. PERCENTAGE OF ROTARY USERS KNOWN 3. IF 1 SUBSTANTIALLY EXCEEDS 2	CUSTOMERS REFUSING TO PLAY THE GAME
1. # CUSTOMERS COOPERATING IN IVR 2. # CUSTOMERS GETTING READOUT BEFORE ABANDONING IF 1 SUBSTANTIALLY EXCEEDS 2	CUSTOMERS RECEIVING NO BENEFIT FROM IVR THOUGH WILLING TO TRY
1. # CALLS 2. # CALLERS COMPLETING AT LEAST 1 FUNCTIONS IN IVR (INCLUDING GETTING READOUT) AND NOT GOING TO AGENT IF 1 SUBSTANTIALLY EXCEEDS 2	LOW "COMPLETE-SELF-SERVE" RATE

FIG. 6D

27/43

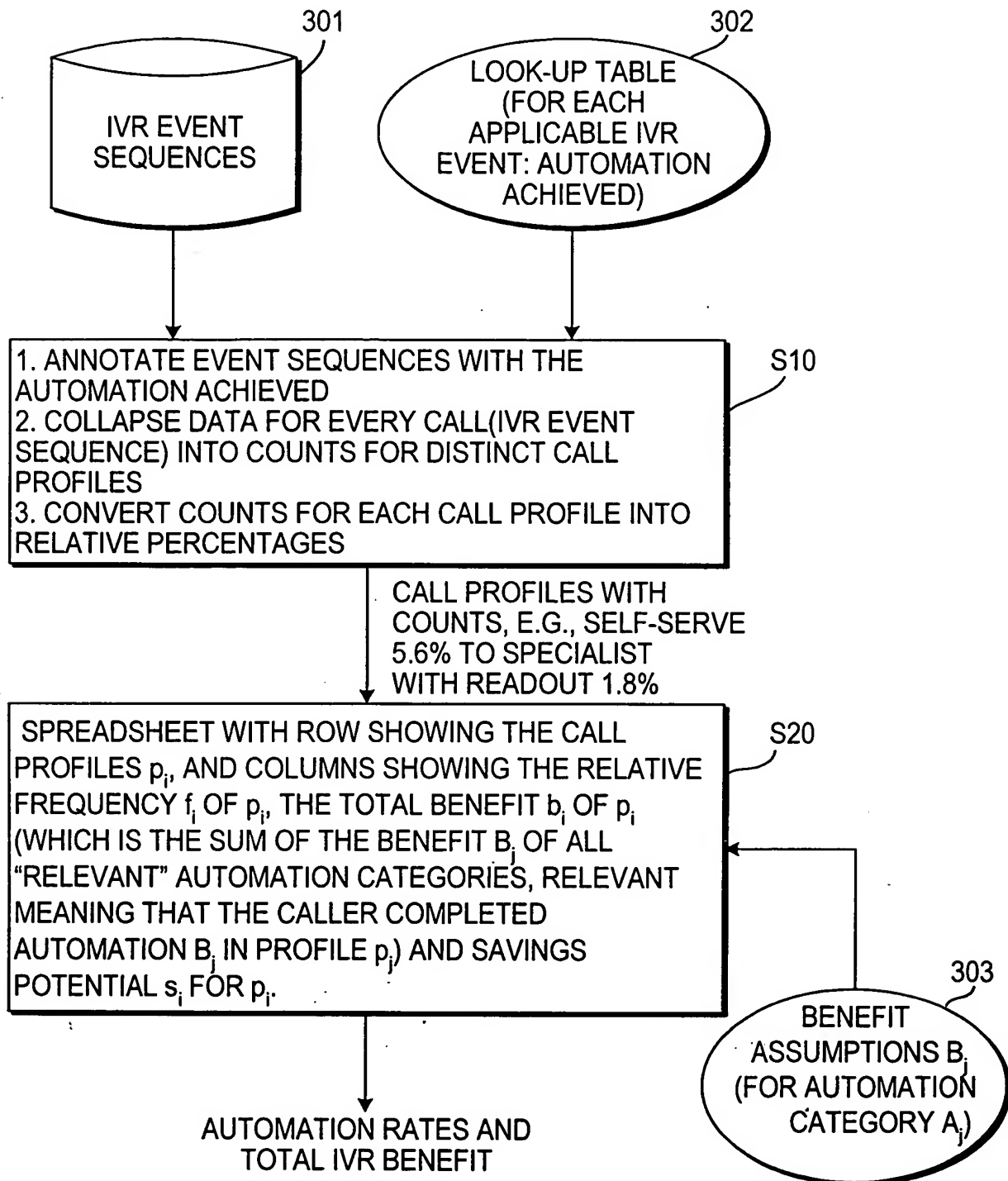


FIG. 7

28/43

CALL PROFILE (P <sub>i</sub> )	TRAFFIC (f <sub>i</sub> )		AUTOMATION (B <sub>ij</sub> )			BENEFIT (AGENT SECS)	
	CALLS	% CALLS	ACCOUNT #	ROUTING	INFO DELIVERY	ONE CALL	AVERAGE
FULLY-AUTOMATED CALLS	72	2.0%	A	R	I	105	2.1
TRANSFERS TO SPECIALIST AFTER INFORMATION READOUT	1	0.0%	A	R	I	105	0.0
TRANSFERS TO FLOOR AFTER INFO READOUT	38	1.0%	A		I	55	0.6
TRANSFERS TO SPECIALIST W/ ID	849	23.4%		R		40	9.3
TRANSFERS TO FLOOR W/ ID	1008	27.7%	A			15	4.2
TRANSFERS TO FLOOR W/O ID	591	16.3%					
MISROUTED TO SPECIALIST W/ ID	389	10.7%	A	-R		-25	-2.7
MISROUTED TO SPECIALIST W/O ID	6	0.2%		-R		-40	-0.1
ABANDONS	681	18.7%					
TOTAL	3636	100.0%	41.5%	14.5%	3.1%		13.4

FIG. 8

AUTOMATION CATEGORY	CALLER IDENTIFICATION ("A")	INFORMATION DELIVERY ("I")	ROUTING ("R")
ASSUMED BENEFIT [AGENT SECS]	15	40	40

FIG. 9

				30/43	
AUTOMATABLE TRANSACTIONS	#OCCURRENCES	TIME SPENT	FREQUENCY	SAVINGS POTENTIAL	AUTOMATION CATEGORY
ACCOUNT_BALANCE	88	27.31	21.5%	5.9	I
NEW_PAYMENT_ARRANGEMENT	56	20.94	13.7%	2.9	T
CURRENT_PAYMENT_ARRANGEMENT	9	22.08	2.2%	0.5	I
ZIP_CODE	2	9.48	0.5%	0.0	A
PAYMENT_LOCATION	18	21.3	4.4%	0.9	I
BALANCED_PAYMENT_PLAN_AMOUNT	6	21.8	1.5%	0.3	I
RULES_12_AND_22	11	13.5	2.7%	0.4	I
NEW_APPOINTMENT_DATE_TIME	84	14.51	20.5%	3.0	A
IS_GAS_APPLIANCE	3	24.75	0.7%	0.2	A
IS_NOT_GAS_APPLIANCE	3	9.22	0.7%	0.1	A
NEW_APPOINTMENT_CONFIRMATION_TELEP	82	18.26	20.0%	3.7	A
NEW_APPOINTMENT_LOCATION	66	15.19	16.1%	2.5	A
NEW_APPOINTMENT_DOG	57	11.72	13.9%	1.6	A
NEW_APPOINTMENT_MULTI_OR_SINGLE		0	0.0%	0.0	A
NEW_APPOINTMENT_ADULT_PRESENT	5	5.29	1.2%	0.1	A
APPOINTMENT_DETAILS_CONFIRMATION	13	36.14	3.2%	1.1	T
TOTAL NUMBER OF ANNOTATED CALLS	409			23.1	

WEIGHTED OPPORTUNITY: 16.6

%HANDLED BY AGENT 72%

FIG. 10

31/43

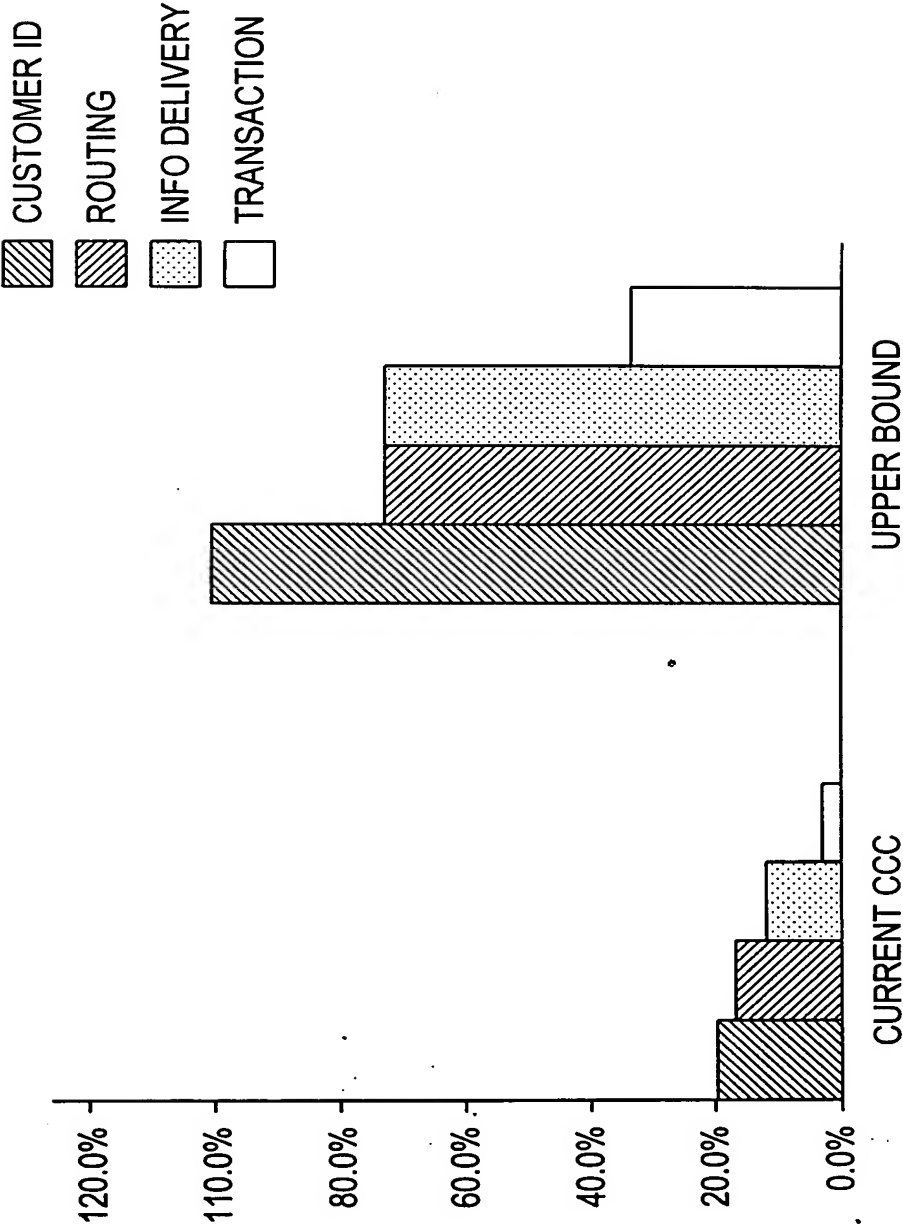
CUSTOMER CONTACT TYPE	% CALLS	AUTOMATION CATEGORIES			
		CUSTOMER ID	ROUTING	INFO DELIVERY	TRANSACTION
CUSTOMER SERVICE	8.7%	X			
BALANCE BILLING	36.7%	X	X	X	
PAYMENT ARRANGEMENTS	13.0%	X	X	X	X
PAYMENT OPTIONS	4.0%	X	X	X	
TURN ON	3.0%				
RATES	1.3%		X	X	
STOP SERVICE	3.5%	X			
SERVICE	11.5%	X			
APPOINTMENT	16.5%	X	X	X	X
EMERGENCY	1.8%	X			
<b>TOTAL/UPPER BOUNDS</b>	<b>100.0%</b>	<b>95.7%</b>	<b>71.5%</b>	<b>71.5%</b>	<b>29.5%</b>

HOW TO TRANSFORM UPPER BOUNDS ON AUTOMATION TO AGENT TIME SAVING OPPORTUNITIES:

BENEFIT ASSUMPTION [AGENT SECS PER CALL]	15	5	40	40
BENEFIT [AGENT SECS]	14.355	3.575	28.6	11.8
TOTAL OPPORTUNITY	58.33			

$95.7\% \times 15 = 14.355$

FIG. 11



EXISTING AUTOMATION LEVELS AND UPPER BOUNDS ON AUTOMATION RATES

FIG. 12



33/43

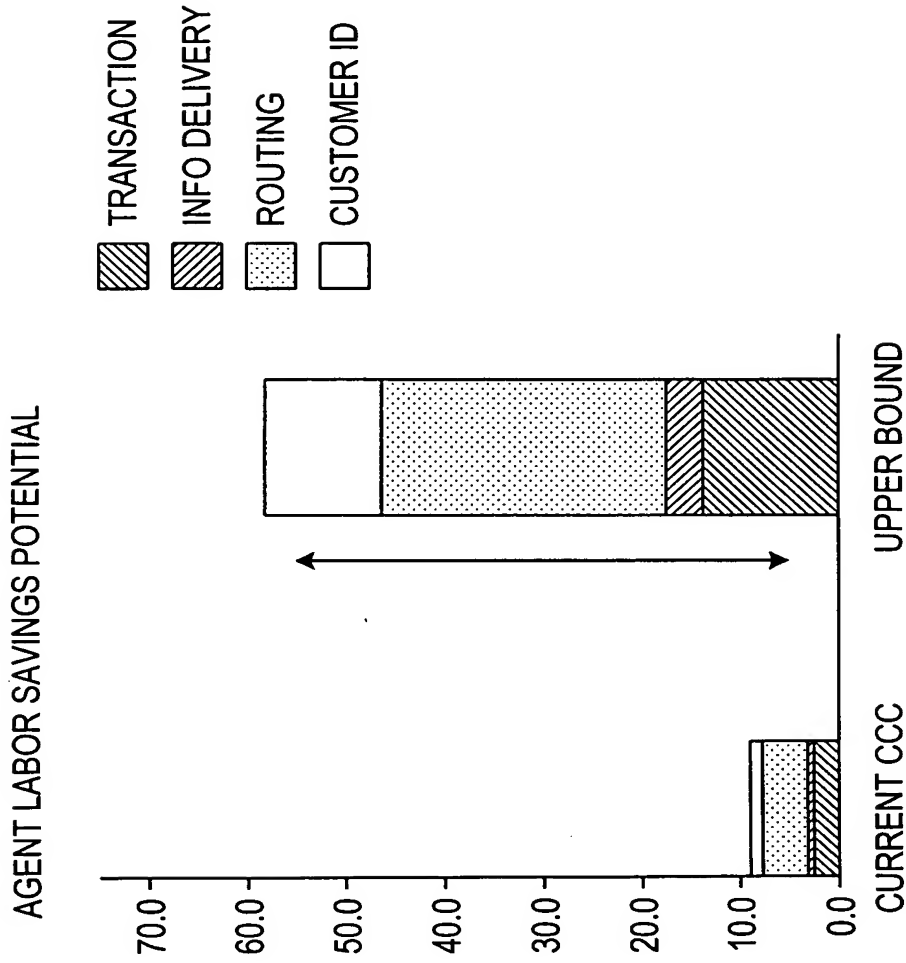
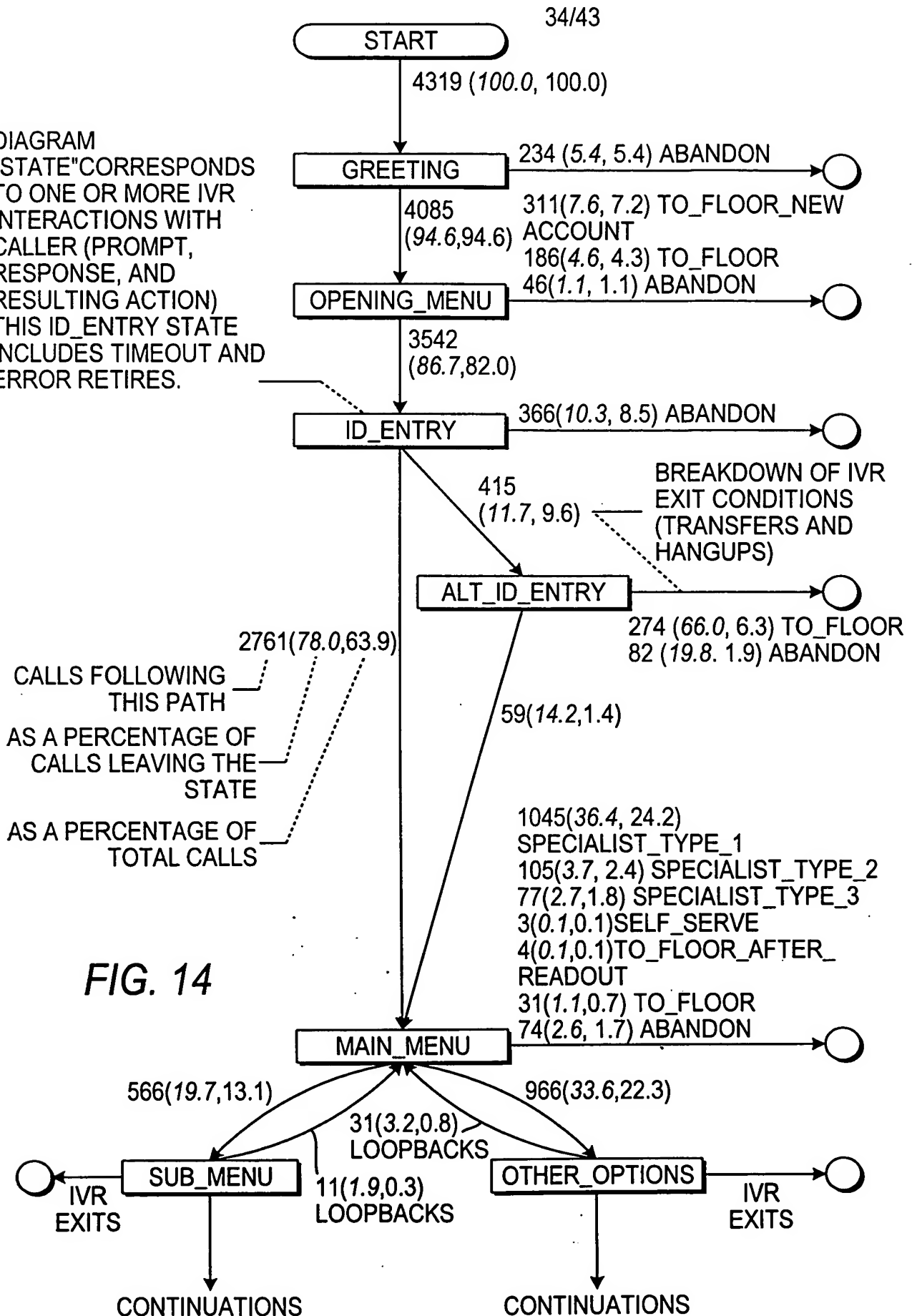


FIG. 13

DIAGRAM  
 "STATE" CORRESPONDS  
 TO ONE OR MORE IVR  
 INTERACTIONS WITH  
 CALLER (PROMPT,  
 RESPONSE, AND  
 RESULTING ACTION)  
 THIS ID\_ENTRY STATE  
 INCLUDES TIMEOUT AND  
 ERROR RETIRES.



35/43

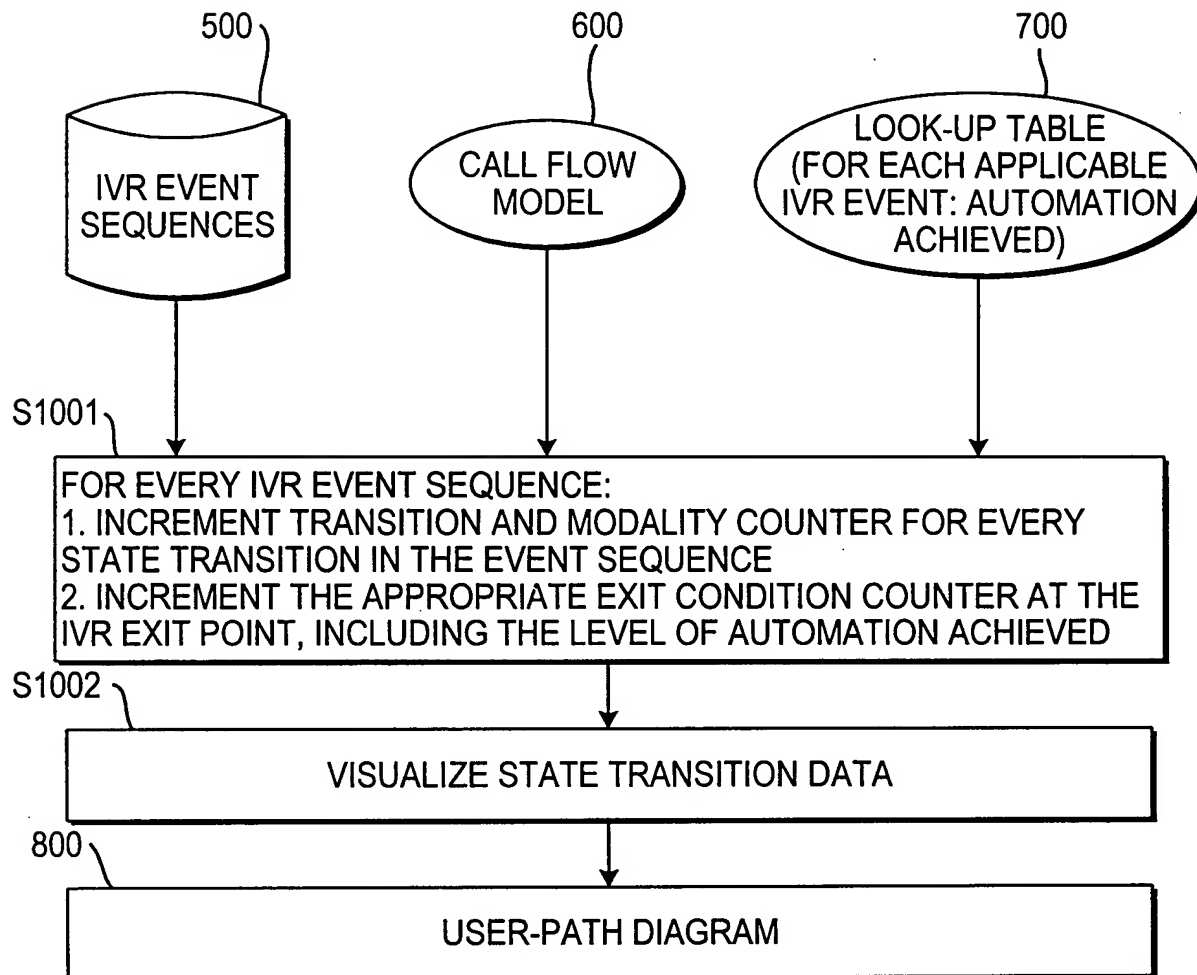
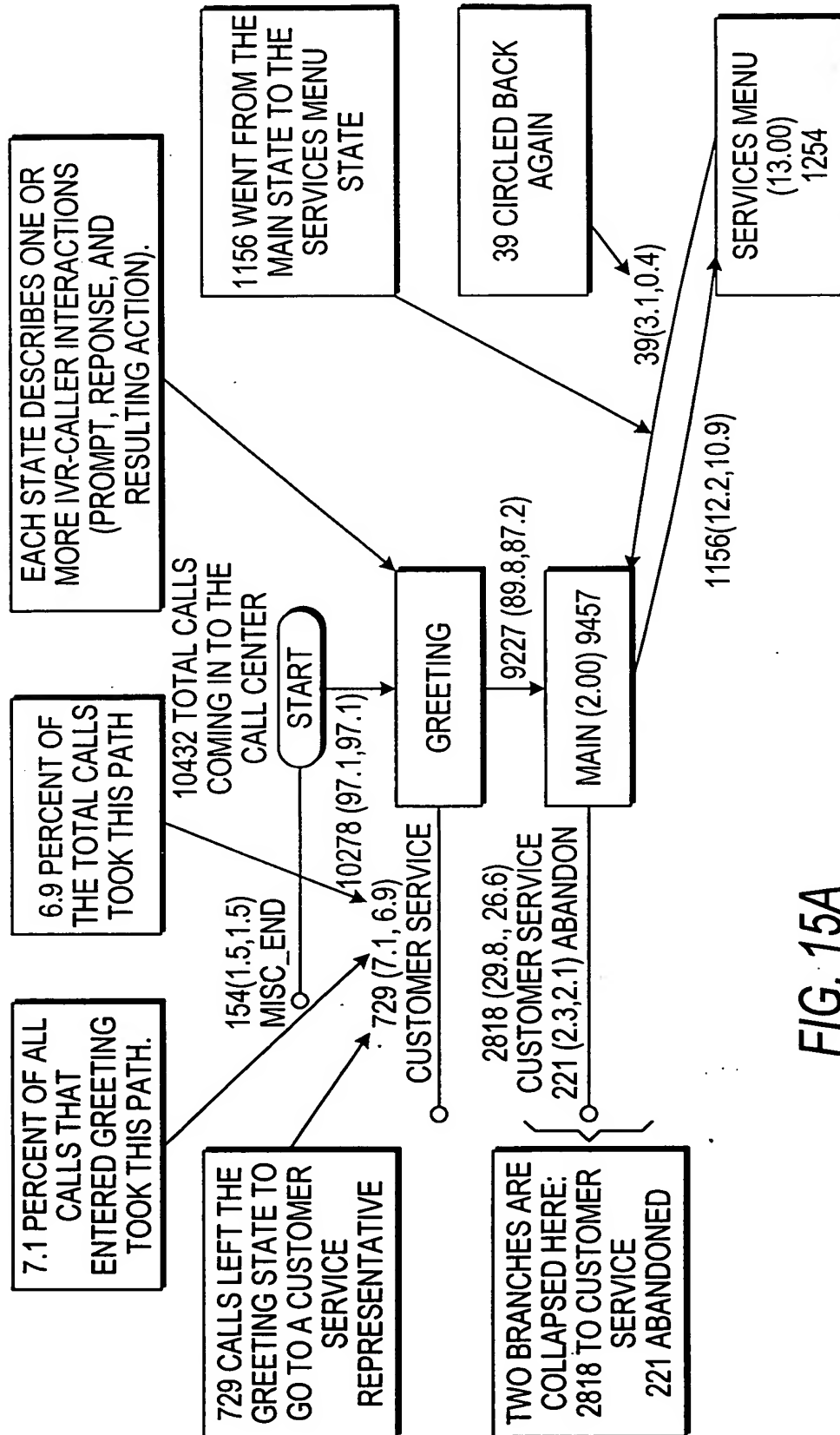


FIG. 15

36/43



APPARATUS AND METHOD FOR VISUALLY  
PRESENTING BEHAVIOR OF A USER OF AN  
AUTOMATED RESPONSE SYSTEM  
Express Mail No. EL029404341US

37/43

TRUE CALL TYPE (FROM AGENT INTERACTION)									
CALLER'S TT MENU CHOICE	SPECIALTY 1		SPECIALTY 2		SPECIALTY 3		FLOOR	CALLS BY ROUTING	CORRECTLY ROUTED
SPECIALTY 1	33		0		16		16	65	51%
SPECIALTY 2	0		24		0		0	24	100%
SPECIALTY 3	0		2		8		0	10	80%
FLOOR	22		10		26		150	208	72%
CALLS BY TRUE TOPIC	55		36		50		166	307	
TOPIC VOLUME	18%		12%		16%		54%	100%	
CORRECTLY IDENTIFIED	60%		67%		16%		90%	70%	
OVERALL ACCURACY									
70%									
DIAGONAL = CORRECTLY ROUTED OTHERS = MISROUTED									

FIG. 16

38/43

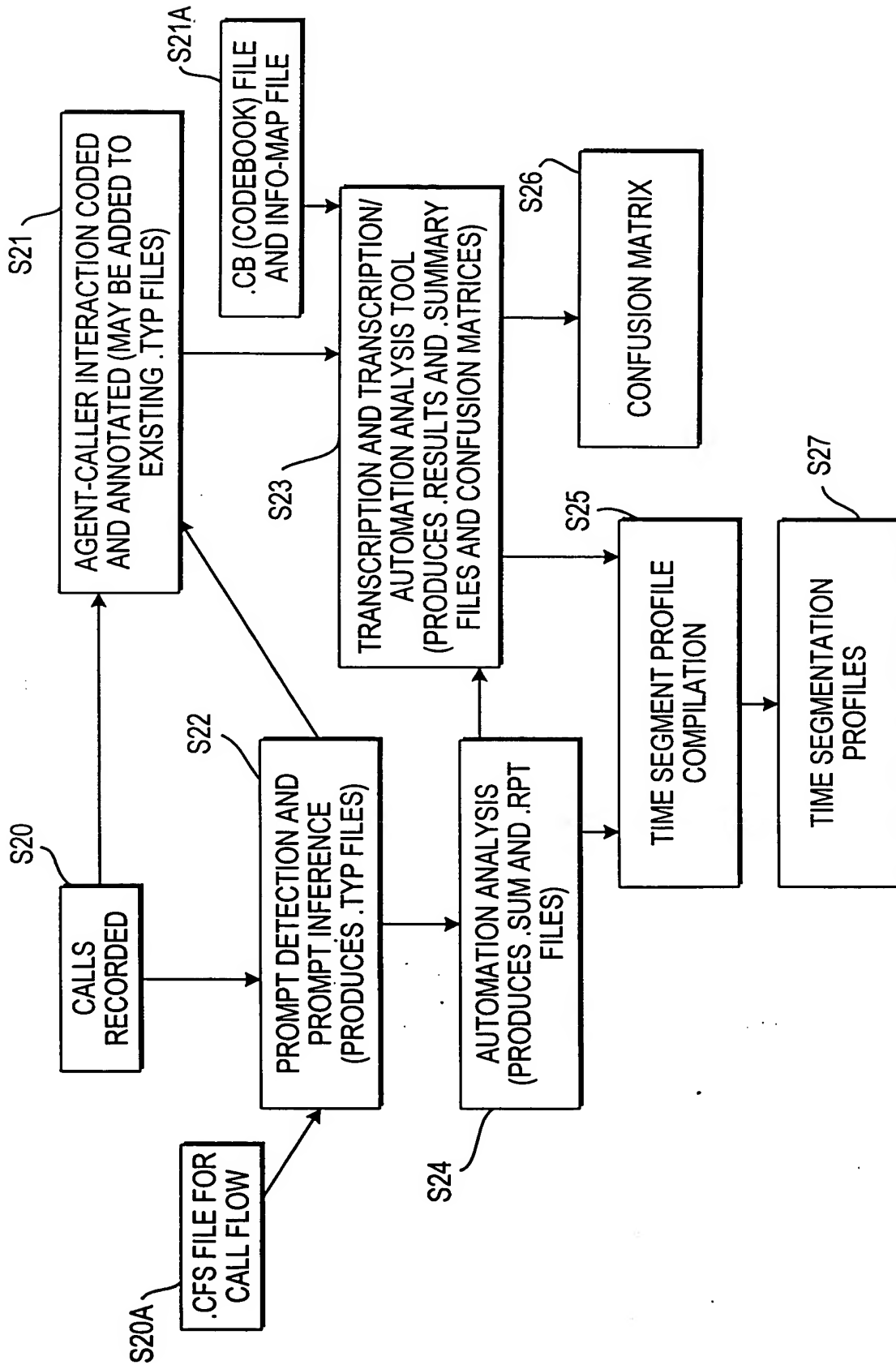


FIG. 16A

39/43

	A	B	C	D	E	F	G	H
1	FILENAME	IVR EXIT	IVR ROUTING	IVR INFORMATION	IVR ROUTING DEST	FIRST AGENT	FIRST AGENT	FIRST TOPIC
2	/DAM/TRANS/	INCOMPLETE	P-AGT_STARTTHOMESERVICE	RULES_12_AND_22_READOUT	TURNON			STRT
3	/DAM/TRANS/	INCOMPLETE	P-AGT_CSRFROMNEWPAY	CALLING_FROM_SERVICE_LOCATION,CONFIRM_ADDR	PAYMENTX			PAY-CHG
4	/DAM/TRANS/	INCOMPLETE	P-AGT_NEWPAYMENTARRAN	CALLING_FROM_SERVICE_LOCATION,TELEPHONE,CO	PAYMENTX			PAY-MAK
5	/DAM/TRANS/	INCOMPLETE	P-AGT_XFERFROMTELEPHON	CALLING_FROM_SERVICE_LOCATION,CONFIRM	BALANCEBILLING			PAY-MAK
6	/DAM/TRANS/	INCOMPLETE	P-AGT_CSRFROMBILLING		BALANCEBILLING			ECI
7	/DAM/TRANS/	INCOMPLETE	P-AGT_CSRFROMBILLING		BALANCEBILLING			RSTR
8	/DAM/TRANS/	INCOMPLETE	P-AGT_DUPSTATFAILURE	CALLING_FROM_SERVICE_LOCATION,TELEPHONE	BALANCEBILLING			OTH
9	/DAM/TRANS/	INCOMPLETE	P-AGT_CSRFROMMAIN		CUSTOMERSERVICE			PAY-MAK
10	/DAM/TRANS/	INCOMPLETE	P-AGT_CSRFROMMAIN		CUSTOMERSERVICE			PAY-REV
11	/DAM/TRANS/	INCOMPLETE	P-AGT_XFERFROMCONFIRMA	CALLING_FROM_SERVICE_LOCATION,CONFIRM_ADDR	PAYMENTX			PAY-MAK
12	/DAM/TRANS/	INCOMPLETE	P-AGENT_START_COMM	RULES_12_AND_22_READOUT	TURNON			CHNG
13	/DAM/TRANS/	INCOMPLETE	P-AGT_NEWPAYMENTARRAN	CALLING_FROM_SERVICE_LOCATION,CONFIRM_ADDR	PAYMENTX			PAY-MAK
14	/DAM/TRANS/	INCOMPLETE	P-AGT_STARTCLEANANDSHO	RULES_12_AND22_READOUT	TURNON			CHNG
15	/DAM/TRANS/	INCOMPLETE	P-AGT_CSRFROMBILLING		BALANCEBILLING			PAY-MAK
16	/DAM/TRANS/	INCOMPLETE	P-AGT_CSRFROMNEWPAY	CALLING_FROM_SERVICE_LOCATION,CONFIRM_ADDR	PAYMENTX			PAY-MAK
17	/DAM/TRANS/	INCOMPLETE	P-AGT_CSRFROMMAIN		CUSTOMERSERVICE			PAY-MAK
18	/DAM/TRANS/	INCOMPLETE	P-AGT_CSRFROMDUPLICATE	CALLING_FROM_SERVICE_LOCATION,TELEPHONE,CO	BALANCEBILLING			ECI
19	/DAM/TRANS/	INCOMPLETE	P-AGT_STARTGASHOME	RULES_12_AND_22_READOUT	TURNON			STRT
20	/DAM/TRANS/	INCOMPLETE	P-AGT_XFERFROMTELEPHON	CALLING_FROM_SERVICE_LOCATION,TELEPHONE	PAYMENTX			BAL
21	/DAM/TRANS/	INCOMPLETE	P-AGT_NEWPAYMENTARRAN	CALLING_FROM_SERVICE_LOCATION,CONFIRM_ADDR	PAYMENTX			PAY-MAK
22	/DAM/TRANS/	INCOMPLETE	P-AGT_XFERFROMTELEPHON	CALLING_FROM_SERVICE_LOCATION,TELEPHONE	BALANCEBILLING			PAY-MAK
23	/DAM/TRANS/	INCOMPLETE	P-AGT_XFERFROMCONFIRMA	CALLING_FROM_SERVICE_LOCATION,TELEPHONE,CO	PAYMENTX			PAY
24	/DAM/TRANS/	INCOMPLETE	P-AGT_CSRFROMMAIN		CUSTOMERSERVICE			OTH
25	/DAM/TRANS/	INCOMPLETE	P-AGT_CSRFROMMAIN		CUSTOMERSERVICE			PAY-MAK
26	/DAM/TRANS/	INCOMPLETE	P-AGENT-ID-MAKE-APPOINTM		APPOINTMENT			RSTR
27	/DAM/TRANS/	INCOMPLETE	P-AGT_CSRFROMMAIN		CUSTOMERSERVICE			RSTR
28	/DAM/TRANS/	INCOMPLETE	P-AGT_STARTTHOMESERVICE	RULES_12_AND_22_READOUT	TURNON			STRT
29	/DAM/TRANS/	INCOMPLETE	P-AGT_CSRFROMMAIN		CUSTOMERSERVICE			PAY-MAK
30	/DAM/TRANS/	INCOMPLETE	P-AGENT-MAIL_ELEC_R	RULES_12_AND_22_READOUT	RATES			STRT
31	/DAM/TRANS/	INCOMPLETE	P-AGT_CSRFROMMAIN		CUSTOMERSERVICE			PAY-MAK
32	/DAM/TRANS/	INCOMPLETE	P-AGT_REFUSEDNEWPAY M	CALLING_FROM_SERVICE_LOCATION,CONFIRM_ADDR	PAYMENTX			PAY-MAK
33	/DAM/TRANS/	INCOMPLETE	P-AGT_INCORRECTNOCCURRE	CALLING_FROM_SERVICE_LOCATION,CONFIRM_ADDR	PAYMENTX			PAY-REV
34	/DAM/TRANS/	INCOMPLETE	P-AGT_XFERFROMTELEPHON	CALLING_FROM_SERVICE_LOCATION,TELEPHONE	PAYMENTX			PAY-MAK
35	/DAM/TRANS/	INCOMPLETE	P-AGT_CSRFROMBILLING		BALANCEBILLING			BIL
36	/DAM/TRANS/	INCOMPLETE	P-AGT_CSRFROMMAIN		CUSTOMERSERVICE			PAY-MAK

FIG. 17

40/43

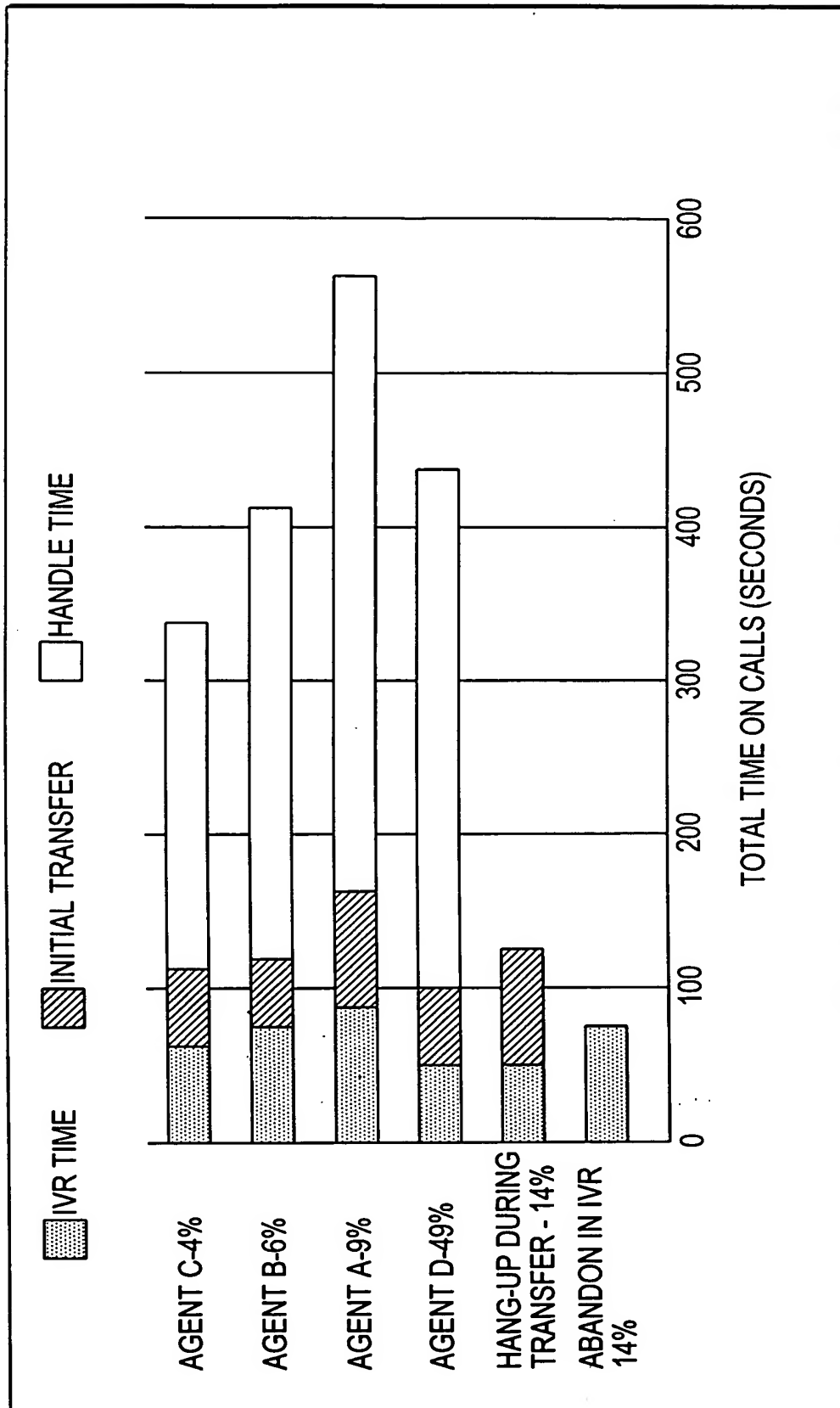


FIG. 18



41/43

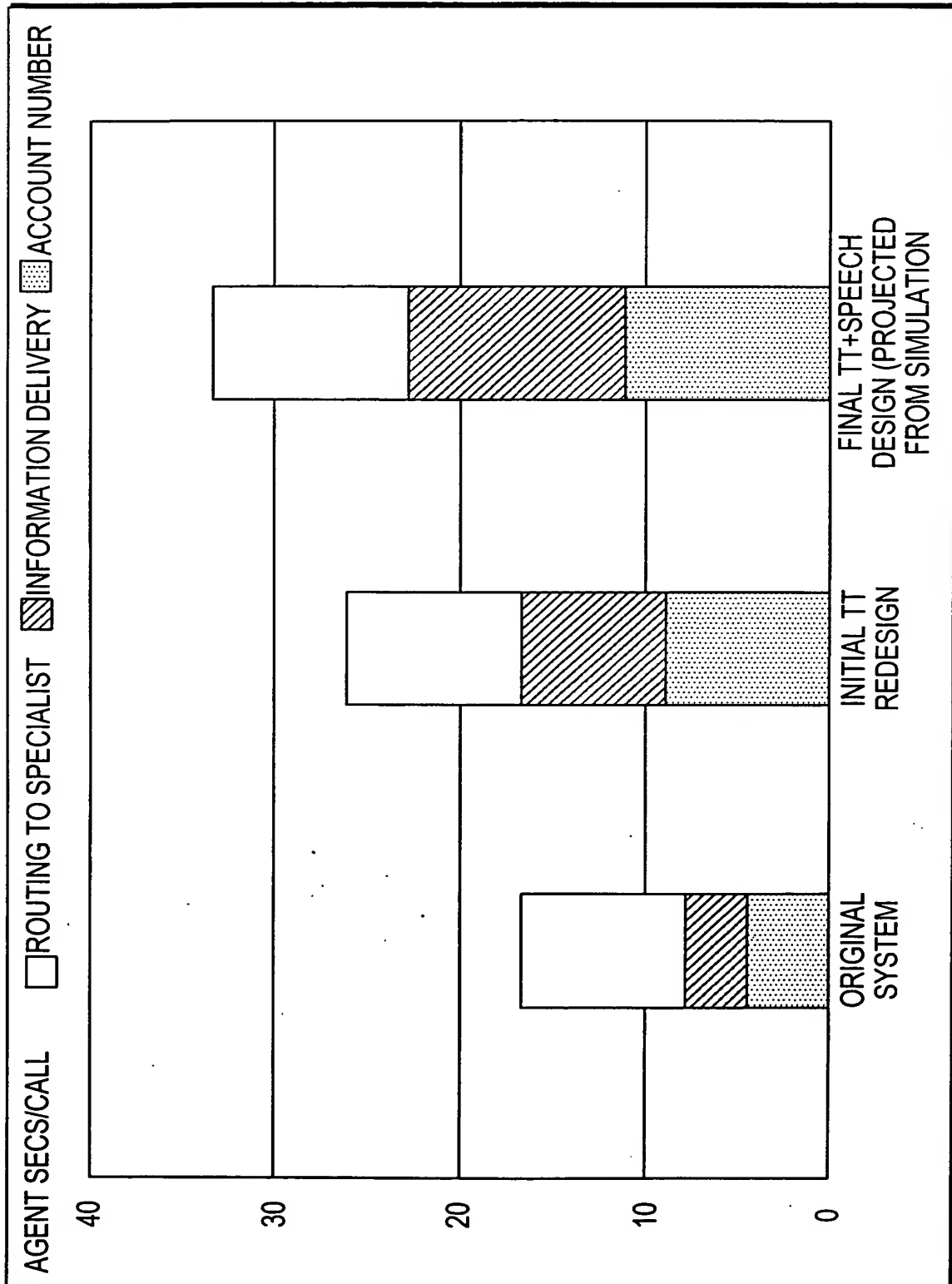


FIG. 19

42/43

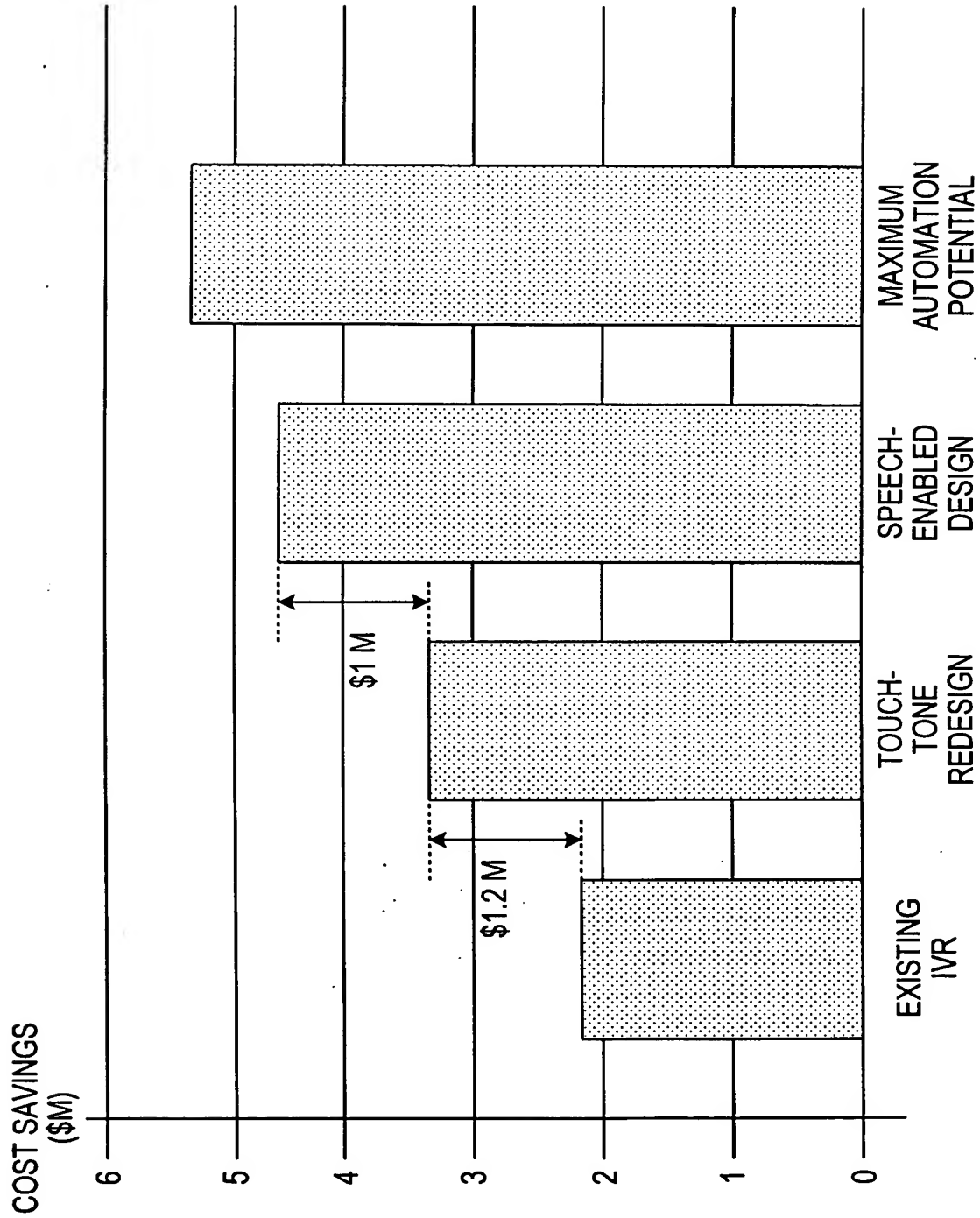


FIG. 19A

43/43

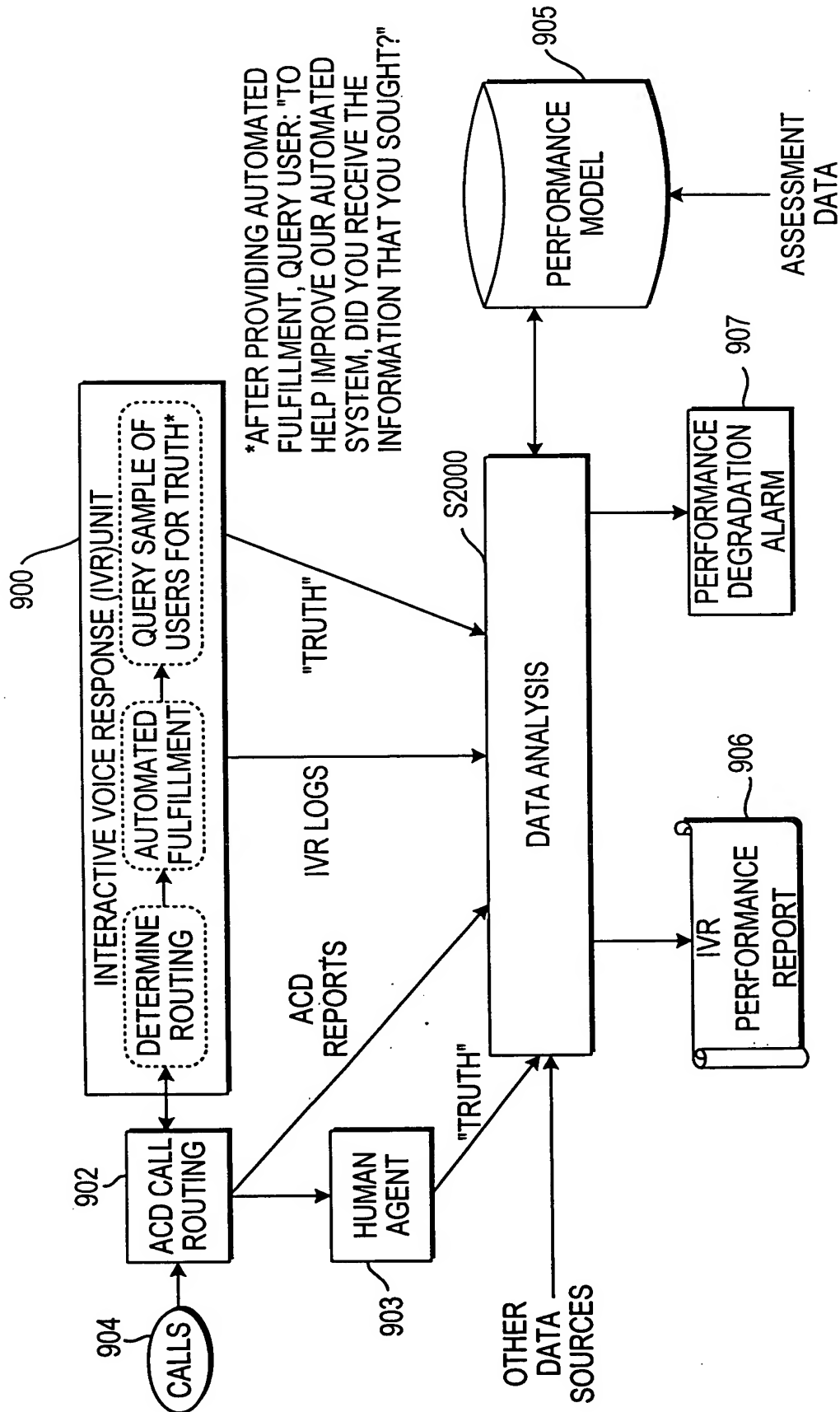


FIG. 20